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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,155	08/20/2003	Raphael J. Weyman	3954-US	5801
56436	7590	05/17/2007		
3COM CORPORATION				
350 CAMPUS DRIVE				
MARLBOROUGH, MA 01752-3064				
EXAMINER				
DUONG, FRANK				
ART UNIT		PAPER NUMBER		
2616				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/644,155

Applicant(s)

WEYMAN ET AL.

Examiner

Frank Duong

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-13 is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. This Office Action is a response to communications dated 08/20/03. Claims 1-13 are pending in the application.

Information Disclosure Statement

2. The information disclosure statement filed 04/15/04 complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. It has been considered and placed in the application file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Jain et al (USP 6,765,914) (hereinafter "Jain").

Regarding **claim 1**, in accordance with Jain reference entirety, Jain shows a distributed router (*Fig. 4 depicts the distributed router and Fig. 7 depicts its operational process*) for multicast packets, comprising:

a fabric (100) composed of a multiplicity of units (120, 130 and 140) each having respective user ports ((123, 124, 125), (133, 134, 135) and (143, 144, 145)), and at least one fabric port (121, 131 and 141), and internal fabric links (150) between fabric ports, said fabric constituting a single network node (col. 3, lines 43-45);

wherein each unit (120, 130 or 140) includes at least one bridge (120, 130 or 140) connected to at least one of the respective user ports ((123, 124, 125), (133, 134, 135) or (143, 144, 145)) and to each fabric port (121, 131 or 141) of the unit and further includes at least one router (110) connected to said bridge (*see fig. 4 for connection details*);

wherein a unit which receives multicast packets intended for forwarding from another unit in the fabric bridges those multicast packets to a fabric port of this unit (*Fig. 7; blocks 730-750 and col. 5, line 59 to col. 6, line 8*); and

wherein a unit having a local user port or ports from which said multicast packets are to be forwarded replicates (floods) said multicast packets as necessary and routes said multicast packets to said local user port or ports (*Fig. 7; blocks 720, 725 and 727 and col. 6, lines 13-27*).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), Jain also discloses wherein each unit includes a bridge (120, 130 or 140) for each of a plurality of domains (*Fig. 4; 401, 402 or 403 or Fig. 6; Red, Green and Blue VLANs and col. 4, lines 66-67*) and on receipt of multicast packets pertaining to a particular domain bridges those packets on said particular domain (col. 5, lines 35-37).

Regarding **claim 3**, in addition to features recited in base claim 2 (see rationales discussed above), Jain also discloses wherein the domains are virtual local area networks (VLANs) (*Fig. 4; 401, 402 or 403 or Fig. 6; Red, Green and Blue VLANs and col. 4, lines 66-67*).

Regarding **claim 4**, in addition to features recited in base claim 1 (see rationales discussed above), Jain also discloses wherein each unit includes forwarding rules (*621, 631 and 641*) that prescribe the forwarding of a given packet to a given fabric port if the unit has available information which indicates that another unit connected to said given fabric requires that given packet (*col. 5, lines 5-30*).

Regarding **claim 5**, in accordance with Jain reference entirety, Jain shows a network unit for use in a fabric of units capable of distributed multicast routing wherein the fabric presents only one routing hop between ingress of multicast packets to the fabric and egress of said packets from the fabric (*figs. 4-7 depict network device 100 and its operational functions are disclosed at col. 4, line 19 to col. 7, line 20*), said network unit (*Fig. 4*) comprising:

- a multiplicity of user ports for connection to an external network (*fig. 4; ports 123-145 connected to VLANs 401, 402 and 403*);

- at least one fabric port for connection to another unit in the fabric (*fig. 4; port 121, 131 or 141 connected to bridge 130, 140 or 120*);

- at least one bridge connected to at least some of said user ports and to each fabric port (*fig. 4; bridge 120, 130 or 140*); and

- a router (110) interfaced (111) with said bridge (120, 130 or 140);

wherein said unit is organized on receipt of multicast packets intended for forwarding from another unit in the fabric to bridge those multicast packets to a fabric port of this unit (*Fig. 7; blocks 730-750 and col. 5, line 59 to col. 6, line 8*); and

wherein said unit is organized, on receipt at a fabric port of multicast packets intended for forwarding from user port or ports of said unit, to replicate (flood) said multicast packets as necessary and to route said multicast packets to said local user port or ports (*Fig. 7; blocks 720, 725 and 727 and col. 6, lines 13-27*).

Regarding **claim 6**, in addition to features recited in base claim 5 (see rationales discussed above), Jain also discloses wherein said unit has a multiplicity of bridges (120, 130 and 140) each connectible to at least some of said user ports (123-145) and connected (150) to each fabric port (121, 131 or 141), each bridge pertaining to a respective bridging domain (*Fig. 4; 401, 402 or 403 or Fig. 6; Red, Green and Blue VLANs and col. 4, lines 66-67*).

Regarding **claim 7**, in addition to features recited in base claim 6 (see rationales discussed above), Jain also discloses wherein each domain is a virtual local area network (*Fig. 4; 401, 402 or 403 or Fig. 6; Red, Green and Blue VLANs and col. 4, lines 66-67*).

Regarding **claim 8**, in addition to features recited in base claim 5 (see rationales discussed above), Jain also discloses wherein the unit has forwarding rules (621, 631 and 641) that prescribe the forwarding of a given packet to a given fabric port if the unit has available information which indicates that another unit connected to said given fabric requires that given packet (*col. 5, lines 5-30*).

Regarding **claim 9**, in accordance with Jain reference entirety, Jain discloses a method of routing multicast packets in a fabric of network units (Figs. 4-7), comprising:

receiving multicast packets at an ingress unit in the fabric (Fig. 7; block 703 and col. 5, lines 44-49);

bridging said packets across the fabric to an egress unit (*Fig. 8; blocks 825-830 and col. 6, lines 57-65*);

replicating said multicast packets as necessary in said egress unit (*Fig. 8; blocks 840-845 and col. 7, lines 6-11*); and

routing said multicast packets in said egress unit, whereby said packets cross said fabric only once each (*Fig. 8; block 850 and col. 7, lines 12-13*).

Allowable Subject Matter

4. Claims 10-13 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record, considered individually or in combination, fails to fairly show or suggest the claimed invention of base claim 10 and further limit with novel and unobvious limitation of "*wherein a unit which receives at a user port unicast packets intended for forwarding from another unit routes those packets to a fabric port of this unit; and wherein a unit which receives at a fabric port unicast packets bridges those unicast packets to another port of that unit,*" structurally and functionally interconnected with other limitations in a manner as recited in claims 10-11.

The prior art of record, considered individually or in combination, fails to fairly show or suggest the claimed invention of base claim 10 and further limit with novel and unobvious limitation of "*wherein the unit is organized on receipt of unicast packets at a user port and intended for forwarding from another unit to routes those packets to a fabric port of this unit; and wherein the unit is organized on receipt of unicast packets at a fabric port bridges those unicast packets to another port,*" structurally and functionally interconnected with other limitations in a manner as recited in claims 12-13.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Weyman et al (USP 7,123,615).

Mahajan et al (USP 6,785,274).

Meier (USP 6,847,620).

Egbert et al (USP 6,807,176).

Tang et al (USP 6,553,028).

Denio et al (USP 6,556,575).

Hegde (USP 6,570,875).

Bare (USP 5,920,699).

Backes et al (USP 5,818,838).

Ammitzboell (USP 6,934,292).

Passmore, The Virtual LAN Technology Report, pages 1-21, 1996.

Finn, Ingress Port Map for 802.1Q, Cisco Systems, pages 1-6, 1997.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**FRANK DUONG
PRIMARY EXAMINER**

May 8, 2007